PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR MANAGEMENT
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION

Indianapolis Castings Company
5565 Brookville Road
Indianapolis, Indiana 46219

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15,IC 13-17 and the Code of Indianapolis and Marion County, Chapter 511.

Significant Source Modification No.: 097-11392-00039	
Issued by: Robert F. Holm, PH.D, Administrator Indianapolis Environmental Resources Management Division	Issuance Date:

TABLE OF CONTENTS

A SOURCE SUMMARY
- A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
- A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

B GENERAL CONSTRUCTION CONDITIONS
- B.1 Permit No Defense [IC 13]
- B.2 Definitions [326 IAC 2-7-1]
- B.3 Effective Date of the Permit [IC13-15-5-3]
- B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]
- B.5 Significant Source Modification [326 IAC 2-7-10.5(h)]
- B.6 Phase Construction Time Frame
- B.7 BACT Determination for Phase Constructions

C GENERAL OPERATION CONDITIONS
- C.1 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
- C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
- C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]
- C.4 Opacity [326 IAC 5-1]
- C.5 Operation of Equipment [326 IAC 2-7-6(6)]
- C.6 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]
- C.7 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
- C.8 Pressure Gauge Specifications
- C.9 Compliance Monitoring Plan - Failure to Take Response Steps
- C.10 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
- C.11 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]
- C.12 General Record Keeping Requirements [326 IAC 2-7-5(3)]
- C.13 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

D.1 FACILITY OPERATION CONDITIONS - Cold Box Core Line

Emission Limitations and Standards [326 IAC 2-7-5(1)]
- D.1.1 Best Available Control Technology [326 IAC 8-1-6]
- D.1.2 Particulate Matter (PM) [326 IAC 6-1-2(a)]
- D.1.3 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]
- D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements
- D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
- D.1.6 Control Device Requirement

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.1.7 Monitoring

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
- D.1.8 Record Keeping Requirements

Certification
Affidavit of Construction

SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and ERMD. The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates foundry and engine assembly plant under Standard Industrial Classification 3321 and 3714.

Responsible Official:	Plant Manager
Source Address:	5565 Brookville Road, Indianapolis Indiana 46219
Mailing Address:	5565 Brookville Road, Indianapolis Indiana 46219
Phone Number:	(317)-352-4892
SIC Code:	3321 and 3714
County Location:	Marion
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major or Minor Source, under PSD Rule; Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) One (1) new core line with a maximum production capacity of 7.9 tons of cores produced per hour. The new core line consists of the following emitting units:

(1) Three (3) sand receiving bins are identified as emission units EU-28B, EU-28C and EU-28D. The emissions generated from the three sand receiving bins are controlled by bin vent filters located on each bin. The emissions from emission units EU-28B, EU-28C and EU-28D are exhausted out stacks SV-28B, SV-28C and SV-28D respectively. Stacks SV-28B, SV-28C and SV-28D vent inside the building.

(2) Three (3) mixers, identified as emission unit EU-28F, is used to mix the Part I Resin and Part II Correactant with the Core Sand. Emissions generated in this area are not exhausted to a stack and are emitted into the building.

(3) Three (3) cold box core machines are identified as emission unit EU-28A. In the core machine, core sand/resin mixture is blown into a cavity the shape of the core to be produced. Once the cavity is filled with the core sand/resin mixture, TEA gas is blown through the cavity to cure the core. The cavity is then purged with air to remove excess TEA gas. After the cavity is purged the cavity is opened and the core is removed. Each machine has a maximum operating capacity of 37.18 pounds per hour of Part I Resin, 30.42 pounds per hour of Part II Coreactant, 5,200 pounds per hour of core sand and 5 pounds per hour of Triethylamine. The TEA gas being blown through the cavity in each machine is exhausted to a common acid scrubber. The overall VOC emissions capture and control efficiency for the emissions associated with TEA gas curing operations is 95%.The acid scrubber exhausts out stack SV-28A.

(4) One (1) 3.6 million Btu natural gas fired drying oven, identified as emission unit EU-28E is used to dry the coating put on the finished cores. Emissions from this dryer are uncontrolled and are vented out one stack identified as SV28-E.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Indianapolis Environmental Resources Management Division (ERMD),Permits Section verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to ERMD if constructed as proposed.

(b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.

(c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(d) The Permittee shall receive an Operation Permit Validation Letter from ERMD, Permits Section and attach it to this document. However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

(1) If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.

(2) If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.

(3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Data Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, and ERMD upon request and shall be subject to review and approval by IDEM, OAM, and ERMD. IDEM, OAM, and ERMD may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Permits
2700 South Belmont Avenue
Indianapolis, Indiana 46221

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

Testing Requirements [326 IAC 2-7-6(1)]

C.6 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Data Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM and ERMD within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, and ERMD, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.7 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this approval. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Data Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.8 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.9 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this approval;

(3) The Compliance Monitoring Requirements in Section D of this approval;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAM and ERMD upon request and shall be subject to review and approval by IDEM, OAM, and ERMD. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.10 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, and ERMD within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM and ERMD shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM and ERMD within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM and ERMD reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM and ERMD that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.11 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM and ERMD may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.12 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, and ERMD representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or ERMD makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or ERMD within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this approval;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the

response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.13 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Data Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

(b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, and ERMD on or before the date it is due.

(c) Unless otherwise specified in this approval, any (quarterly or semi-annual) report shall be submitted within thirty (30) days of the end of the reporting period. The report(s) does(do) not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) new core line with a maximum production capacity of 7.9 tons of cores produced per hour. The new core line consists of the following emitting units:

(1) Three (3) sand receiving bins are identified as emission units EU-28B, EU-28C and EU-28D. The emissions generated from the three sand receiving bins are controlled by bin vent filters located on each bin. The emissions from emission units EU-28B, EU-28C and EU-28D are exhausted out stacks SV-28B, SV-28C and SV-28D respectively. Stacks SV-28B, SV-28C and SV-28D vent inside the building.

(2) Three (3) mixers, identified as emission unit EU-28F, is used to mix the Part I Resin and Part II Correactant with the Core Sand. Emissions generated in this area are not exhausted to a stack and are emitted into the building.

(3) Three (3) cold box core machines are identified as emission unit EU-28A. In the core machine, core sand/resin mixture is blown into a cavity the shape of the core to be produced. Once the cavity is filled with the core sand/resin mixture, TEA gas is blown through the cavity to cure the core. The cavity is then purged with air to remove excess TEA gas. After the cavity is purged the cavity is opened and the core is removed. Each machine has a maximum operating capacity of 37.18 pounds per hour of Part I Resin, 30.42 pounds per hour of Part II Coreactant, 5,200 pounds per hour of core sand and 5 pounds per hour of Triethylamine. The TEA gas being blown through the cavity in each machine is exhausted to a common acid scrubber. The overall VOC emissions capture and control efficiency for the emissions associated with TEA gas curing operations is 95%.The acid scrubber exhausts out stack SV-28A.

(4) One (1) 3.6 million Btu natural gas fired drying oven, identified as emission unit EU-28E is used to dry the coating put on the finished cores. Emissions from this dryer are uncontrolled and are vented out one stack identified as SV28-E.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Best Available Control Technology [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 the Permittee shall achieve an overall control efficiency of ninety five percent (95%) for the Triethlyamine emissions from the coldbox core machines, identified as emission unit EU-28A. With the use of the acid scrubber to reduce triethylamine emissions by ninety five percent (95%), the PTE of VOCs and combined HAPs from the new core line are 7 tons per year and 4 tons per year respectively. Compliance with this condition satisfies the requirement to limit the VOC emissions to less than PSD significance thresholds of 40 tons per year, therefore PSD regulation 326 IAC 2-2 and 40 CFR Part 52.21 does not apply. Compliance with this condition satisfies the requirement to limit the HAP emissions below the major source threshold of 25 tons for combined HAPs and 10 tons for any single HAP, therefore the requirements of 326 IAC 4 and 40 CFR Part 63.41 does not apply.

D.1.2 Particulate Matter (PM) [326 IAC 6-1-2(a)]

Pursuant to 326 IAC 6-1-2(a) the PM emissions shall not exceed 0.03 grains per dry standard cubic foot from the sand receiving bins identified as emission units EU-28B, EU-28C and EU-28D and the drying oven identified as emission unit EU-28E. This emissions limitation is

equivalent to 13.18 tons of PM emissions from point and fugitive sources per 365 day period. Compliance with this condition shall make the PSD regulation 326 IAC 2-2 and 40 CFR Part 52.21 not applicable.

D.1.3 PSD Minor Source Limit [40 CFR Part 52.21][326 IAC 2-2]

The Permittee shall limit the filterable and condensible emissions of PM-10 to less than 0.03 grains per dry standard cubic foot of exhaust gas from the sand receiving bins identified as emission units EU-28B, EU-28C and EU-28D. This emissions limitation is equivalent to 13.18 tons of PM-10 from point and fugitive sources per 365 day period. Compliance with this condition shall make the PSD regulation 326 IAC 2-2 and 40 CFR Part 52.21 not applicable.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this cold box core machines, identified as emission unit EU-28A and associated control device.

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) The Permittee is not required to test this emission units EU-28B, EU-28C, EU-28D, or EU-28E by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM or ERMD , compliance with the PM or PM-10 limit specified in Conditions D.1.2 and D.1.3 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

(b) The Permittee shall preform VOC testing at the inlet and out let of the acid scrubber used to control the VOC emissions from emissions unit EU-28A. During each test the Permittee shall measure the usage of TEA to ensure an overall capture and control efficience of ninety five percent. Performance tests shall be conducted according to the times frames and procedures specified in condition C.6 of this permit. Performance tests shall be conducted utilizing EPA approved methods or other methods as approved by the Commissioner. In addition to these requirements, IDEM or ERMD may require compliance testing when necessary to determine if the facility is in compliance.

D.1.6 Emission Control Requirement

Pursuant to 326 IAC 8-1-6, the acid scrubber shall be in operated at all time that the cold box core machines, identified as emission unit EU-28A, are in operation in a manner designed to achieve an overall control efficiency of ninety five percent for TEA emissions.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.7 Monitoring

The Permittee shall monitor and record the acid content, pressure drop and flow rate of the scrubber, at least once per week. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pH of scrubber liquor shall be maintained within the range of 2 and 5.4 or a range established during the most recent stack test. The Compliance Response Plan for the scrubber shall contain troubleshooting contingency and corrective actions for when the acid content, pressure drop and flow rate readings are outside of the normal range for any one reading.

The instruments used for determining the acid content, pressure drop and flow rate shall be subject to approval by ERMD, and shall be calibrated at least once every six (6) months.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.8 Record Keeping Requirements

(A) To document compliance with Condition D.1.7, the Permittee shall maintain the following:

(1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure;

(B) Acid content of the scrubber liquid; and

(C) Scrubber liquid flow rate.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
AIR QUALITY MANAGEMENT SECTION
DATA COMPLIANCE

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Indianapolis Castings Company
Source Address: 5565 Brookville Road Indianapolis Indiana 46219
Mailing Address: 5565 Brookville Road Indianapolis Indiana 46219
Source Modification No.: T097-11392-00039

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Mail to: Air Quality Management Section
Environmental Resources Management Division
2700 South Belmont Avenue
Indianapolis, Indiana 46221-2097

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____,I have personal knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____ .
(Company Name)

4. I hereby certify that ,*Indianapolis Castings Company has constructed the Cold Box Core Line* in conformity with the requirements and intent of the construction permit application received by the Environmental Resources Management Division on *September 3, 1999* and as permitted pursuant to Source Modification Permit T097 -11392-00039**,** issued on _____

5. Additional (?operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the permit. (Delete this statement if it does not apply.)

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

_____
Signature

_____
Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 19 _____ .

My Commission expires: _____

_____
Signature

_____
Name (typed or printed)

Indiana Department of Environmental Management
Office of Air Management
and
Indianapolis Environmental Resources Management Division
Air Quality Management Section

Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name:	Indianapolis Casting Corporation
Source Location:	5565 Brookville, Indianapolis Indiana 46219
County:	Marion
SIC Code:	3321 and 3714
Operation Permit No.:	*T*097-6993-00039
Operation Permit Issuance Date:	Pending
Significant Source Modification No.:	T097-11392-00039
Permit Reviewer:	Patrick Coughlin

The Office of Air Management (OAM) and Indianapolis Environmental Resources Management Division (ERMD) has reviewed a modification application from Indianapolis Foundry Corporation relating to the construction of the following emission units and pollution control devices:

(a) One (1) new core line with a maximum production capacity of 7.9 tons of cores produced per hour. The new core line consists of the following emitting units:

(1) Three (3) sand receiving bins are identified as emission units EU-28B, EU-28C and EU-28D. The emissions generated from the three sand receiving bins are controlled by bin vent filters located on each bin. The emissions from emission units EU-28B, EU-28C and EU-28D are exhausted out stacks SV-28B, SV-28C and SV-28D respectively. Stacks SV-28B, SV-28C and SV-28D vent inside the building.

(2) Three (3) mixers, identified as emission unit EU-28F, is used to mix the Part I Resin and Part II Correactant with the Core Sand. Emissions generated in this area are not exhausted to a stack and are emitted into the building.

(3) Three (3) cold box core machines are identified as emission unit EU-28A. In the core machine, core sand/resin mixture is blown into a cavity the shape of the core to be produced. Once the cavity is filled with the core sand/resin mixture, TEA gas is blown through the cavity to cure the core. The cavity is then purged with air to remove excess TEA gas. After the cavity is purged the cavity is opened and

the core is removed. Each machine has a maximum operating capacity of 37.18 pounds per hour of Part I Resin, 30.42 pounds per hour of Part II Coreactant, 5,200 pounds per hour of core sand and 5 pounds per hour of Triethylamine. The TEA gas being blown through the cavity in each machine is exhausted to a common acid scrubber. The overall VOC emissions capture and control efficiency for the emissions associated with TEA gas curing operations is 95%.The acid scrubber exhausts out stack SV-28A.

(4) One (1) 3.6 million Btu natural gas fired drying oven, identified as emission unit EU-28E is used to dry the coating put on the finished cores. Emissions from this dryer are uncontrolled and are vented out one stack identified as SV28-E.

History

On September 3, 1999, Indianapolis Foundry Corporation submitted an application to the ERMD and OAM requesting to add a new core line to their existing plant. Indianapolis Casting Corporation submitted a complete Part 70 application on October 24, 1996.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
SV-28A	TEA Scrubber	47	2.8	28,000	Ambient
SV-28B	Sand Mixer BH	37	1.2	3,900	Ambient
SV-28C	Sand Mixer BH	37	1.2	3,900	Ambient
SV-28D	Sand Mixer BH	37	1.2	3,900	Ambient
SV-28C	Drying Oven	NA	NA	NA	NA

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 3, 1999, Additional information was received on September 23, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A pages 1 through 3.)

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material

combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	4
PM-10	4
SO_2	Negligible
VOC	69
CO	1
NO_x	2

HAP's	Potential To Emit (tons/year)
Phenol	0
Isophorone	0.6
Phenyliscoyanate	0
TEA	65.7
TOTAL	66.3

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4) and (6), since this modification has potential to emit VOCs greater than 25 tons per year and potential to emit HAPs greater than 10 tons of an individual HAP and 25 tons of a combination of HAPs. This significant source modification is for combined preconstruction and operating approval. Since this source does not have a final Part 70 permit the source may begin construction once the approval is issued, but may not begin operation until validation letter is issued pursuant to the requirements specified in 326 IAC 2-7-10.5(h).

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Marion County has been classified as attainment or unclassifiable for PM-10, SO_2, NO_2, CO and Pb. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Greater than 250
PM-10	Greater than 250
SO_2	Greater than 100 and less than 250
VOC	Greater than 250
CO	Greater than 250
NOx	Greater than 250

(a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.

(b) These emissions are based upon Draft Part 70 Operating Permit.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Cold Core Box (EU-28A)	Negligible	Negligible		3.92 [(1)]			
Mixers (EU-28F)	Negligible	Negligible		3.02 [(1)]			
Sand Receiving Bin (EU-28B)	4.39 [(2)]	4.39 [(2)]					
Sand Receiving Bin (EU-28C)	4.39 [(2)]	4.39 [(2)]					
Sand Receiving Bin (EU-28D)	4.39 [(2)]	4.39 [(2)]					
Drying Oven (EU-28E)	0.2	0.2	0.01	0.1	0.3	1.6	Negligible
Total PTE	13.38	13.38	Negligible	7.04	Negligible	Negligible	Negligible
PSD Significance Level	25	15	40	40	100	40	Not Applicable
PSD Applies (Yes or No)	Not Applicable	No	No	No	No	No	Not Applicable

[(1)] The VOC emissions associated with the use of TEA gas in the core curing process was limited to 95% overall control efficiency

or 3.29 tons per year pursuant to 326 IAC 8-1-6. The potential emissions from uncontrolled evaporative loss of VOC associated with the cold box line was equivalent to 3.02 tons per year. The total PTE for VOCs for the new core line was established at 6.94 tons per year which is below the PSD significance threshold, therefore the PSD regulation does not apply.

(2) The PM-10 and PM emissions associated with the sand handling operations identified as emissions units EU-28B, EU-28C and EU-28D are limited to 0.03 grains per dry standard cubic foot (gr/dscf) of exhaust gas. Based on 8760 hour of operation at 0.03 gr/dscf and a total flow rate of 11,700 scfm from the sand storage bin exhaust stacks the PM-10 and PM emissions would be 13.18 tons per year. The PM and PM-10 emissions from emission units EU-28A and EU-28E were determined to be negligible since the sand is being mixed with the resins in these processes. Since the total PM and PM-10 emissions from point and fugitive sources are less than the PSD significance thresholds, the PSD regulation does not apply.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Associated emissions units are those that are not physically modified but will experience an emission increase as a result of a particular project. These types of units are often termed de-bottlenecked units because their ability for greater capacity utilization results when the bottleneck in a production process is eliminated as part of a project. Per EPA netting guidance, debottlenecked emissions are calculated as part of a project's emissions increase.

No associated emissions will occur as a result of the cold box core line project, since the amount of engines produced at this source cannot and will not, increase as a result of the proposed modification.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

(1) 40 CFR Part 63.43 and 326 IAC 2-4 applies to any owner or operator who constructs a major source of hazardous air pollutants (HAPs), as defined in 40 CFR 63.41, after July 27, 1997. The limited PTE for HAPs from the new core line is 3.92 tons per year for combined HAP, which is below the major source thresholds. Therefore the requirements of 40 CFR Part 63.43 and 326 IAC 2-4 do not apply.

(b) Since this source has submitted a complete Part 70 application prior to April 20, 1998 and this unit is not a large Pollutant Specific Emission Unit (PSEU), the requirements of Federal Compliance Assurance Monitoring (CAM) Regulation, 40 CFR Part 64, does not apply at this time. However the Federal CAM Regulation will apply to this unit at the time of permit renewal since the potential pre-controlled emissions are greater than 100 tons per year.

State Rule Applicability - Individual Facilities

Particulate Matter Limitations (326 IAC 6-1)

Since this source is located in Marion county and has potential PM emissions greater than100 tons per year the requirements of 326 IAC 6-1 apply. Since this emissions unit is not specifically regulated under subsection (b) through (g) of 326 IAC 6-1 the general emissions limitation under subsection (a) applies. Pursuant to 326 IAC 6-1-2(a) the PM emissions from the three core sand receiving bins EU-28B, EU-28C and EU-28D and drying oven EU-28E are each limited to 0.03 grains per dry standard cubic foot of exhaust gas. This emissions limitation is equivalent to 13.18 tons of PM per 365 day period. Compliance with this condition shall make the PSD regulation 326 IAC 2-2 and 40 CFR Part 52.21 not applicable.

New Source General Emissions Reduction Requirements (326 IAC 8-1-6)
Since this emissions unit has potential emissions before control greater than 25 tons per year and the unit is being installed after January 1, 1980 the requirements of 326 IAC 8-1-6 apply. Pursuant to 326 IAC 8-1-6 the source is required reduce VOC emissions using best available control technology.

Based on a review of the BACT/LEAR clearing house as well as the control technologies available to the foundry industry has shows that a TEA scrubber is the only alternative presently in use in similar applications. BACT for a similar operation at the Daimler Chrysler facility located in Indianapolis has been approved as 95% overall control for TEA usage in the core curing process.

Please note that there was not Top Down BACT analysis provided in the application, however since this control technology was previous approved as BACT for similar operations ERMD is approving 95% overall control for TEA usage in the core curing process as BACT pursuant to 326 IAC 8-1-6.

ERMD is requiring that Indianapolis Casting Company to demonstrate compliance with the BACT requirements by requiring ICC to conduct simultaneous testing of the inlet and outlet of the control device and measurement of the actual TEA gas being used during the test.

The BACT requirement satisfy the requirement to limit the VOC emissions to less than the PSD significance thresholds such the 326 IAC 2-2 and 40 CFR Part 51.21 does not apply.

The BACT requirement satisfy the requirement to limit the HAP emissions to less than the major source thresholds such the MACT requirements for the construction and reconstruction of major source under regulations 326 IAC 2-4 and 40 CFR Part 63.43 does not apply.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The TEA scrubber associated with the cold box core making operation has applicable compliance monitoring conditions as specified below:

    (a) The Permittee shall monitor and record the acid content, pressure drop and flow rate of the scrubber, at least once per week. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pH of scrubber liquor shall be maintained within the range of 2 and 5.4 or a range

established during the most recent stack test. The Compliance Response Plan for the scrubber shall contain troubleshooting contingency and corrective actions for when the acid content, pressure drop and flow rate readings are outside of the normal range for any one reading.

(b) The instruments used for determining the acid content, pressure drop and flow rate shall be subject to approval by ERMD, and shall be calibrated at least once every six (6) months.

The condition is required to ensure compliance with the BACT requirement established pursuant to 326 IAC 8-1-6.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 097-11392-00039.

Appendix A - Emissions Calculation

Company Name: Indianapolis Casting Company
Source Modification: T097-11392-00039
Plt ID: 00039
Reviewer: PWC

Emission Unit	EU-28A	EU-28B	EU-28C	EU-28d
Description	(3) Cold Box Core Machines	Sand Rec. Bin	Sand Rec. Bin	Sand Rec. Bin
Stack ID:	SV-28A	SV-28B (vents inside)	SV-28C (vents inside)	SV-28D (vents inside)
Stack Flowrate:	28,000	3,900	3,900	3,900
Stack Gas Temp.:	Ambient	Ambient	Ambient	Ambient
Stack Flowrate:	28,000	3,900	3,900	3,900
Control Device:	Scrubber	Bin Vent Filter	Bin Vent Filter	Bin Vent Filter
Control Efficeincy:	95%	80%	80%	80%
Capture Efficeincy:	100%	100%	100%	100%

Maximum Operating Capacity		
Part 1 Resin:	37.18	lbs/hr-machine
Part II Resin:	30.42	lbs/hr-machine
Sand:	5,200	lbs/hr-machine
TEA Gas:	5	lbs/hr-machine

VOC and HAP Emissions

					Potential VOC		Potential VOC (Controlled)		Potential HAP		Potential HAP
Material	Component	%VOC by Wt.	% HAP by Wt.	% Flash Off	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr
Part I Resin	Phenol	3.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Ester Solvents	20.00%	0.00%	3.25%	0.73	3.18	0.73	3.18	0.00	0.00	0.00
	Isophorone	4.00%	4.00%	3.25%	0.15	0.64	0.15	0.64	0.15	0.64	0.15
Part II Coreactant	Polymeric DipenImethane Diisocynate	49.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Methylene Phenylisocynate	37.00%	37.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEA	Triethylamine	100.00%	100.00%	100.00%	15.00	65.70	0.75	3.29	15.00	65.70	0.75
					Total:	69.51	Total:	7.10	Total:	66.34	Total:

Example Calculations:
Uncontrolled pounds of component / hr-cold box machine x % weight VOC (or HAP) x %consitutent evapaorated x 3 cold box machines = pounds VOC (or HAP) /hr
Controlled (TEA) pounds of component / hr x (1 - 0.95) = pounds VOC (or HAP) /hr

Particulate Emissions

				Air Flowrate								
		Potential PM/ PM-10		Sand Bin	Controlled Potential Emissions		PM Limit	Individual Bin Limited PTE PM/PM-10			Total for all 3 Bins Limited PTE PM/PM-10	
Pollutant	Emission Factor (gr/dscf)	lbs/hr	tons/yr	(SCFM)	lbs/hr	tons/yr	(GR/DSCF)	lbs/hr	tons/yr		lbs/hr	tons/yr
PM	0.03	1.00	4.39	3900	0.20	0.88	0.03	1.00	4.39		3.01	13.18
PM-10	0.03	1.00	4.39	3900	0.20	0.88	0.03	1.00	4.39		3.01	13.18

Example Calculations:
Uncontrolled (grains/ standard cubic foot x standard cubic foot/minute x 60 minutes/hour)/(7,000 grains/pounds) = pounds/hour
Controlled (grains/ standard cubic foot x standard cubic foot/minute x 60 minutes/hour)/(7,000 grains/pounds) x (1- control efficiency) = pounds/hour

Appendix A: Emission Calculations
Natural Gas Combustion Only
MM Btu/hr 0.3 - < 10

Company Name: Indianapolis Casting Company
Source Modification: T097-11392-00039
Plt ID: 00039
Reviewer: PWC

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.6	31.5

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	13.7	13.7	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.2	0.2	0.01	1.6	0.1	0.3

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton